



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,191	04/11/2000	Anil Nori	50277-0370.	4144

29989 7590 09/29/2004

HICKMAN PALERMO TRUONG & BECKER, LLP
1600 WILLOW STREET
SAN JOSE, CA 95125

EXAMINER

COLBERT, ELLA

ART UNIT PAPER NUMBER

3624

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,191

Applicant(s)

NORI ET AL.

Examiner

Ella Colbert

Art Unit

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26-35 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 and 26-35 is/are allowed.
- 6) ☒ Claim(s) 38-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-24, 26-35, and 38-43 are pending in the Response filed 06/28/04 to the Office action mailed April 28, 2004.
2. The 35 USC 112, second paragraph rejection argued by Applicants' is convincing and is hereby withdrawn.
3. The 35 USC 101 Rejection argued by Applicants' is convincing and is hereby withdrawn.
4. Claims 1-24 and 26-35 still remain allowed for the reasons here below.

Allowable Subject Matter

5. Claims 1-24 and 26-35 now renumbered 1-34 are allowable in light of the Applicants' arguments and in light of the prior art made of record.
6. The following is an Examiner's Statement of Reasons for Allowance:

The present Application has been thoroughly reviewed. Upon searching a variety of databases, the Examiner respectfully submits that –reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class, reading database metadata that defines how to derive object ids from values in one or more columns, and generating in the manner defined by the database metadata, an object id derived from one or more values in the one or more columns in the one or more rows –in a method of independent claim 1, reading first database metadata that indicates how to generate a column object from one or more

Art Unit: 3624

columns and reading a first set of data from the one or more columns of a plurality of rows from the set of one or more tables, wherein the second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns of independent claim 7, database metadata that indicates how to derive object ids from values in one or more columns and a set of one or more tables, the set of one or more tables containing one or more rows, wherein the one or more rows do not store an object id for modeling the data in the one or more rows as an object that belongs to the object class – a system of independent claim 16, first database metadata that defines how to generate a column object from one or more columns and second database metadata that defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns –a system of independent claim 19, a computer readable medium carrying one or more sequences of one or more instructions for presenting data from a set of one or more tables as a set of objects that belong to an object class, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class and reading database metadata that defines how to derive object ids from values in one or more columns in independent claim 20 and a computer-readable medium carrying one or more sequences of one or more instructions for presenting, as an object, data from a set of one or more tables

Art Unit: 3624

residing in one or more database, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading first database metadata that defines how to generate a column object from one or more columns and reading a first set of data from the one or more columns of a plurality of rows from the set of one or more tables, wherein second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns in independent claim 26, is not taught by the prior art of record (PTO-892, 1449).

Therefore, all pending claims are hereby allowed.

Since allowable subject matter has been indicated, Applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3624

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,907,847) Goldberg in view of (US 6,374,252) Althoff et al, hereafter Althoff.

With respect to claim 38, Goldberg teaches, A method for deriving object ids for data in a table that is managed by a database server and is defined by a table definition, comprising: maintaining, separate from the table definition, metadata that indicates how to derive object ids from values stored in the table (col. 6, lines 24-64).

Goldberg fails to teach, the database server deriving object ids for the data in the table based on the metadata. Althoff teaches, the database server deriving object ids for the data in the table based on the metadata (col. 7, lines 36-45, col. 12, lines 59-62, and col. 23, lines 43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the database server derive the object ids for the data in the table based on the metadata and to modify in Goldberg in view of Goldberg's teachings of metadata, a database server, and object ids because such a modification would allow Goldberg to have a table that contains an object identifier with metadata including table relations to define each table in the DBMS.

Art Unit: 3624

With respect to claim 39, Goldberg teaches, The method of Claim 38, further comprising the step of generating, based on a particular object id of said object ids, an object reference (col. 2, lines 22-52).

With respect to claim 40, Goldberg teaches, The method of Claim 39, further including the steps of: presenting particular data from said table as an object belonging to an object class and having said particular object id (col. 3, lines 21-38); said database server executing a database statement that identified said object reference (col. 6, lines 41-64); and wherein execution of said database statement causes the database server to access said particular data as said object (col. 6, lines 65-67 and col. 7, lines 1-21).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,374,252) Althoff et al, hereafter Althoff in view of (US 5,600,005) Hoover et al, hereinafter Hoover

With respect to claim 41, Althoff teaches, The method for presenting data from a set of one or more tables in a database, the method comprising the steps of:

In response to executing a query that references an object view as if the object view were a table (col. 29, lines 3-67 and col. 30, lines 1-52). Althoff failed to teach, performing the steps of: reading data from one or more rows of the set of one or more

Art Unit: 3624

tables indicated by metadata defines said object view, the object view defining a presentation of data as a set of objects that reside in said database, the set of one or more tables including at least one relational table. Hoover teaches, performing the steps of: reading data from one or more rows of the set of one or more tables indicated by metadata defines said object view, the object view defining a presentation of data as a set of objects that reside in said database, the set of one or more tables including at least one relational table (col. 14, lines 66-67, col. 15, lines 1-31, col. 25, lines 16-29, fig. 8 (step 130 shows one or more tables), col. 50, lines 42-62, fig. 23 (shows a display screen that can be read)). Althoff and Hoover failed to teach, accessing said data from one or more rows as a set of objects that reside in said database, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to access said data from one or more rows as a set of objects that reside in said database and to modify in Althoff in view of Althoff's teachings of a table-based data model and an object-based relational model because such a modification would allow Althoff to have a computer system with a row of information about an individual format and another system may have information about the same individual in a different format with each characteristic constituting a separate field or attribute of a row in a relational or table-based model.

12. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althoff and Hoover in view of (US 5,907,847) Goldberg.

With respect to claim 42, Althoff and Hoover failed to teach, The method of claim 41, further including the step of said database server executing a database statement at

Art Unit: 3624

a database server, wherein execution of said database statement by said database server causes said database server to access said data from one or more rows.

Goldberg teaches, The method of claim 41, further including the step of said database server executing a database statement at a database server, wherein execution of said database statement by said database server causes said database server to access said data from one or more rows (col. 2, lines 9-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the step of said database server executing a database statement at a database server, wherein execution of said database statement by said database server causes said database server to access data from one or more rows and to modify in Althoff because such a modification would allow Althoff to have a system that uses tables that contains information that describes the structure of the data in the database management system.

With respect to claim 43, Althoff and Hoover failed to teach, The method of claim 42, wherein: said database statement includes an object reference to a particular object of said set of objects; and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows. Goldberg teaches, The method of claim 42, wherein: said database statement includes an object reference to a particular object of said set of objects; and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows (col. 3, lines 20-67 and col. 4, lines 1-3). It would have been obvious to one having ordinary skill in the art at the time the

Art Unit: 3624

invention was made to have the said database statement include an object reference to a particular object of said set of objects and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows and to modify in Althoff because such a modification would allow Althoff have to a Database Management Server to access separate sources to obtain information and consistency between the DBMS server and the client.

Response to Arguments

13. Applicant's arguments with respect to claim 38-43 have been considered but are not persuasive.

Issue no. 1: Applicants' argue: Goldberg mentions absolutely nothing of object ids or deriving object ids. Therefore, Goldberg cannot possibly disclose anything about how metadata is used to derive object ids, much less how such metadata is separately maintained as claimed has been considered but is not persuasive. Response: It is interpreted that Goldberg teaches objects ids in col. 6, lines 55-62 (example: Employee ID). It is further interpreted that Goldberg implicitly teaches deriving object ids in col. 6, lines 1-15.

Issue no. 2: Applicants' argue: Althoff does not suggest or disclose that object ids are derived based on metadata. Therefore, Althoff cannot possibly disclose anything about how metadata is used by a database server to derive object ids for data in a table has been considered but is not persuasive. Response: It is interpreted that Althoff teaches how metadata is used by a database server to derive object ids for data in a table in col. 7, lines 47-67 (building a meta-model relational database).

Art Unit: 3624

Issue no. 3: Applicants' argue: The cited section of Althoff contains nothing that relates to a view, much less queries that reference views, nor does any other section of Althoff teach such features. Thus Althoff cannot possibly disclose anything about presenting data from a set of one or more tables in a database in response to executing a query, where the query references an object view as if the object view were a table has been considered but is not persuasive. Response: It is interpreted Althoff teaches presenting data from a set of one or more tables in a database in response to executing a query, where the query references an object view as if the object view were a table in col. 30, lines 10-52 and col. 31, lines 12-31 ("the user interface presents the query results to table to a user showing objects found by the search and each searchable property the user selected for display with the user having the capability to view the properties (object view)).

In conclusion: Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Examiner is entitled to give claim limitations in this rejection of claim 1 and others, for example under Section 103 of Title 35 of the United States Code, the Examiner carefully drew up a correspondence between the Applicants' claimed limitations and one or more referenced passages in Goldberg, Althoff, and Hoover what is well known in the art and what is obvious to one having ordinary skill in the art. The Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the Specification (see below):

Art Unit: 3624

2111 Claim Interpretation; Broadest Reasonable Interpretation [R-1]

>CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE INTERPRETATION

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).<

Suggestion: Claims 38-43 could be made allowable if Applicant would incorporate the allowable subject matter into those claims or cancel claims 38-43 and file a continuation. The other claims are allowed.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Inquiries

Art Unit: 3624

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


E. Colbert
September 22, 2004



**VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600**